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**Fax Cover Sheet**

To: Examiner Scott E. Jones  
Company: USPTO  
Subject: Appl. 09/734523 Interview

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**Confidential:**

Examiner:

Attached is a proposed agenda for our interview scheduled for January 15, 2003. I look forward to discussing this application with you tomorrow and thank you in advance for your time and consideration.

Cheers,

Merle Richman

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Applicant(s): Collins

Application No.: 09/734523

Filed: 12/11/2000

Title: Detecting Movement Characteristics of an Object

Attorney Docket No.: RS0010US

Group Art Unit:  
3713Examiner:  
Scott E. Jones

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Commissioner for Patents  
Washington, D.C. 20231Proposed Agenda for January 15, 2003 Interview

## I. Discuss Prior Art Reference – Teder, '204 Patent

- a. Determination of Speed, Loft Angle, and Aim Angle of an object trajectory via a curve fitting analysis with one or more sensors that are placed a distance from the object trajectory so that trajectory has a curved aspect.
- b. As sensors are moved closer and object moves more quickly, trajectory becomes non-curvilinear and invention does not teach how to determine speed, loft angle, and aim angle for a non-curvilinear trajectory (as detected by the sensor(s)).
- c. Set spin rate to nominal rate – not determined – no teaching how to determine.
- d. No discussion of received signal amplitude evaluation.
- e. Mere mention that it would be nice to determine Spin rate or axis in 3<sup>rd</sup> paragraph of Column 23 – no teachings.

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II. Discuss Prior Art Reference – Chadwell, '533 Patent

- a. Teaches use of enhanced object energy reflection to determine the object's distance and direction only from a sensor, in particular to locate the object when lost.
- b. Expects object to be at rest, in particular does not include teaching/suggestion that system could be employed with a moving object (distance determination would be inaccurate due object movement and energy frequency Doppler shifting.)

III. Discuss Combination of Prior Art Reference Teder and Chadwell Patents

- a. No teaching, suggestion, or motivation to combine references given Chadwell related to non-moving object location
- b. No teaching, suggestion, or motivation to combine references given Teder related to curve fitting analysis only.

IV. Discuss Claimed Invention (Claims 62-123) in view of Examiner's rejection

- a. Note that claims 65, 71 and others related to Spin rate determination are not obvious in view of Teder/Chadwell given review of Prior Art.
- b. Note that claims 66, 77 and others related to Spin axis determination are not obvious in view of Teder/Chadwell given review of Prior Art.

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V. Discuss Prior Art Reference Mihran '971 Patent

- a. Teaches a spin rate determination method that requires parallel path (sensor aligned/parallel to object's expected trajectory)
- b. Teaches a spin axis determination method that also requires parallel path and at least three contrasting markers where at least one marker is not parallel or symmetric with the others (otherwise can only determine magnitude of spin axis (off center), not +/- off center))

VI. Discuss Claimed Invention (Claims 62-123) in view of Mihran

- a. Claims 65, 71 (spin rate determination) require sensor energy path be non-parallel to objects expected trajectory/path
- b. Claims 66, 77 (spin axis determination) may modify claims to specify symmetric contrast marker or sensor's non-parallel to object's expected trajectory.

Respectfully Submitted,



January 14, 2003  
Date

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